	Application No.	Applicant(s)
Notice of Allowability	09/976,627	RADHAKRISHNAN ET AL.
	Examiner	Art Unit	
	Kamini S. Shah	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *after final amendment filed on 8/19/05.*

2. ☒ The allowed claim(s) is/are *1,2,4,5,12,13,15,16,23,24,26,27 and 34-39.*

3. ☒ The drawings filed on *12/12/01* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *8/26/05*

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

KAMINI SHAH
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

The application has been amended as follows:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): In a data communication network wherein data is transmitted from a first node to a second node, a method for operating said first node, said method comprising:

transmitting data packets from said first node to said second node;

determining when space is available in a retransmission buffer;

storing, said data packets in said retransmission buffer when it is determined that space is available in said retransmission buffed;

holding said data packets in a queue when it is determined that space is not available in said retransmission buffer and space is available in said queue;

discarding said data packets when it is determined that space is not available in said retransmission buffer and space is not available in said queue; and

receiving bitmap information from said second node that identifies packets to be retransmitted.

Claim 2 (original): The method of claim 1 further comprising: retransmitting said packets identified by said bitmap information to said second node.

Claim 3 (canceled).

Claim 4 (original): The method of claim 1 wherein said data communication network comprises a point to multipoint network.

Claim 5 (original): The method of claim 4 wherein transmitting comprises: transmitting employing a DOCSIS MAC protocol.

Claim 6-11 (canceled).

Claim 12 (previously presented): In a data communication network wherein data is transmitted from a first node to a second node, apparatus for operating said first node, said apparatus comprising:

　　　means for transmitting data packets from said first node to said second node;

　　　means for determining when space is available in a retransmission buffer;

　　　means for storing said data packets in said retransmission buffer when it is determined that space is available in said retransmission buffer;

　　　means for holding said data packets in a queue when it is determined that space is not available in said retransmission buffer and space is available in said queue;

　　　means for discarding said data packets when it is determined that space is not available in said retransmission buffer and space is not available in said queue;

　　　and means for receiving bitmap information from said second node that identifies packets to be retransmitted.

Claim 13 (original): The apparatus of claim 12 further comprising: means for

retransmitting said packets identified by said bitmap information to said second node, .

Claim 14 (canceled).

Claim 15 (original): The apparatus of claim 12 wherein said data communication

network comprises a point to multipoint network.

Claim 16 (original): The apparatus of claim 15 wherein said means for transmitting

comprises: means for transmitting employing a DOCSIS MAC protocol.

Claims 17-22 (canceled).

Claim 23 (currently amended): In a data communication network wherein data is

transmitted from a first node to a second node, a computer program product on

computer-readable storage medium for operating said first node, said apparatus

comprising:

        code that transmits data packets from said first node to said second node;

        code that determines when space is available in a retransmission buffer;

        code that stores said data packets in said retransmission buffer when it is

determined that space is available in said retransmission buffer;

code that holds said data packets in a queue when it is determined that space is

not available in said retransmission buffer and space is available in said queue;

code that discards said data packets when it is determined that space is not

available in said retransmission buffer and space is not available in said queue;

code that receives bitmap information from said second node that identifies

packets to be retransmitted; and

a computer-readable storage medium that stores the codes.

Claim 24 (currently amended): The computer program product on computer readable-

storage medium of claim 23 further comprising: code that retransmits said packets

identified by said bitmap information to said second node.

Claim 25 (canceled).

Claim 26 (currently amended): The computer program product on computer readable-

storage medium of claim 23 wherein said data communication network comprises a

point to multipoint network.

Claim 27 (currently amended): The computer program product on computer readable-

storage medium of claim 26 wherein said code that transmits comprises:

code that transmits employing a DOCSIS MAC protocol.

Claims 28-33 (canceled)

Claim 34 (previously presented): The method of claim 2 wherein retransmitting said

packets identified by said bitmap information to said second node includes

retransmitting said packets until a retry limit is approximately reached.

Claim 35 (previously presented): The apparatus of claim 13 wherein said means for

retransmitting said packets identified by said bitmap information to said second node

include means for retransmitting said packets until a retry limit is approximately

reached.

Claim 36 (currently amended): The computer program product on computer readable-

storage medium of claim 23 wherein said code that retransmits said packets identified

by said. bitmap information to said second node includes code that retransmits said

packets until a retry limit is approximately reached.

Claim 37 (previously presented): The method of claim 1 wherein transmitting said data

packets from said first node to said second node includes encapsulating said data

packets such that a sequence number is appended in a header for each transmitted

data packet to facilitate retransmission.

Claim 38 (previously presented): The method of claim 12 wherein said means for transmitting comprises means for including a sequence number with each transmitted data packet to facilitate retransmission.

Claim 39 (currently amended): The computer program product on computer readable-storage medium of claim 23 wherein said code that transmits comprises code that includes a sequence number with each transmitted data packet to facilitate retransmission.

REASONS FOR ALLOWANCE

2.   The following is an examiner's statement of reasons for allowance: the cited prior art does not teach a data communication network wherein data is transmitted from first node to second node comprising "determining when space is available in a retransmission buffer, storing said data packets....; holding said data packet.....; and discarding said data packets .....; and receiving bit map information from said second node that identifies packets to be retransmitted, as in claims 1,12 and 23. Additionally, cited prior art does not suggest transmitting data packets includes encapsulating said data packets such that a sequence number is appended in a header for each transmitted data packet to facilitate retransmission as in claim 37.
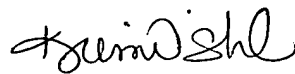
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamini S. Shah whose telephone number is 571-272-2279. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B. Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Kamini S Shah
Primary Examiner
Art Unit 2142

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